

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.

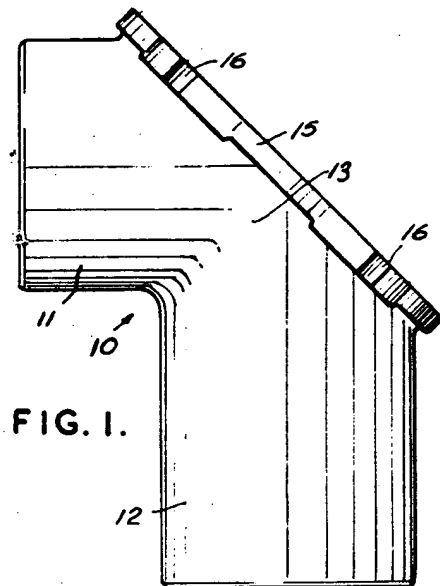


FIG. 1.

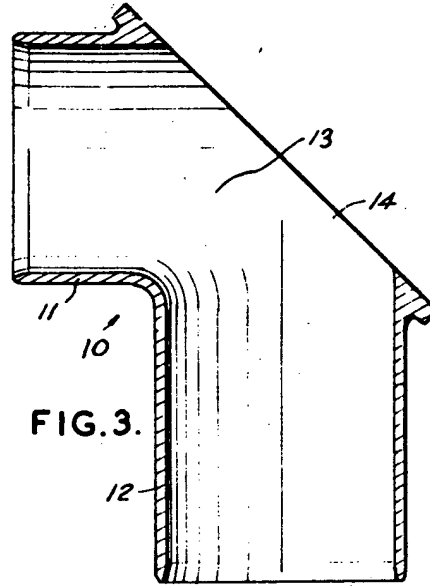


FIG. 3.

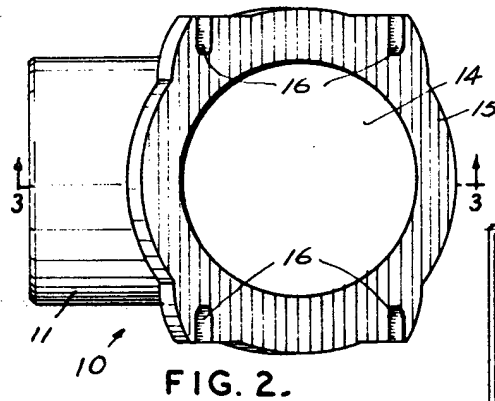


FIG. 2.

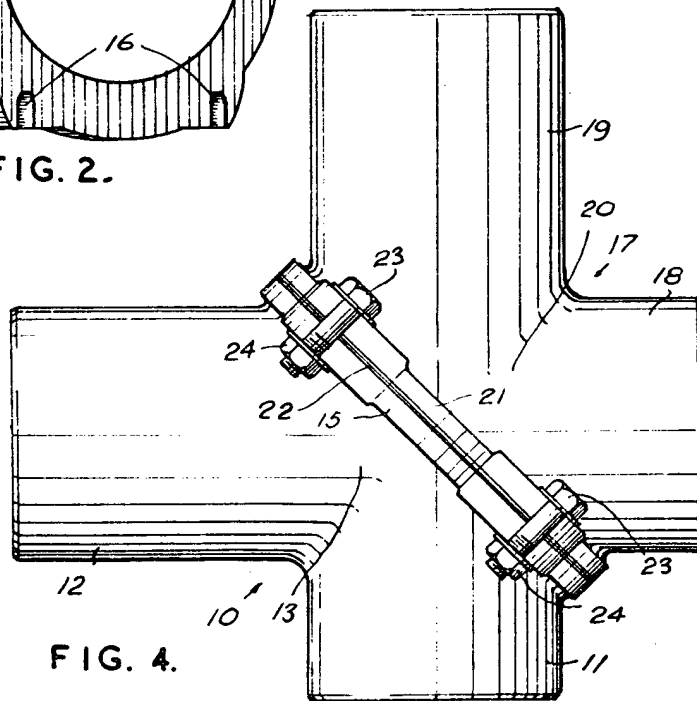


FIG. 4.

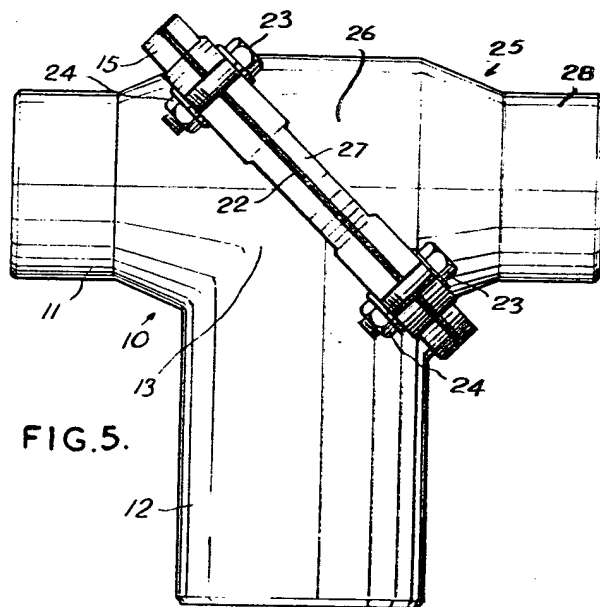


FIG. 5.

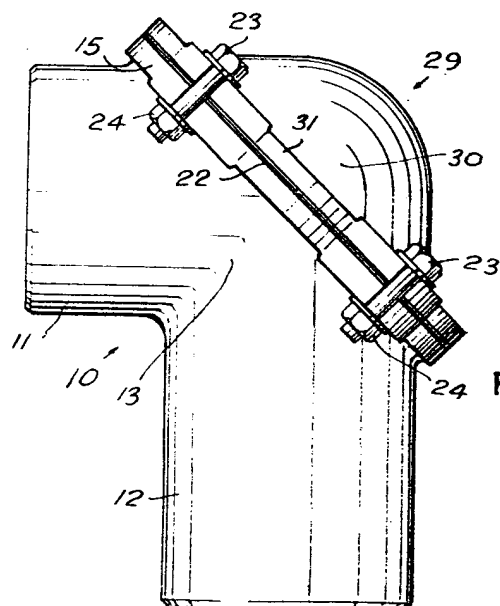


FIG. 6.

251, 043

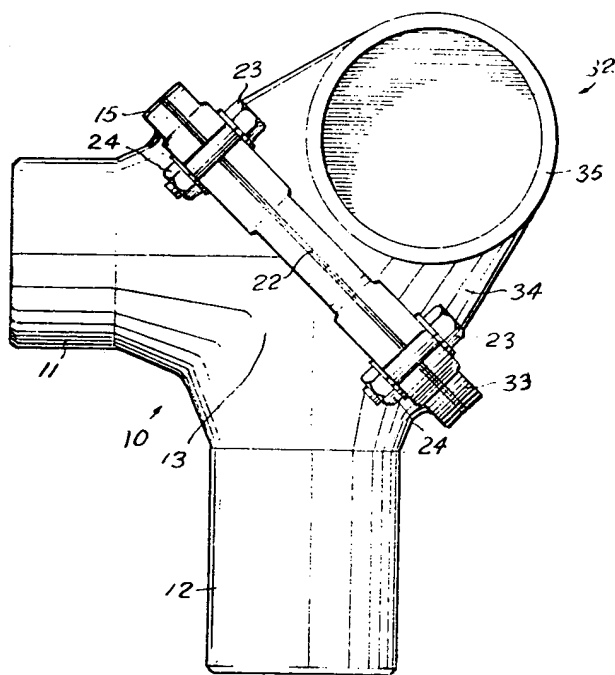


FIG. 7.

251043

COMMONWEALTH OF AUSTRALIA
PATENT SPECIFICATION

53, 964/59

283

Complete Specification Lodged 16th September, 1960.

Application Lodged (No. 53, 964/59) 23rd October, 1959.

AUSTRALIA
356
Grey

Applicant..... Albert Martin Sutton.

Actual Inventor..... Not Stated.

LAPSED BEFORE ACCEPTANCE.

Complete Specification Published 20th September, 1962.

Classification 74. 5; 31. 9.

International Classification A 01 g; F 06 l.

Drawings (2 sheets) attached.

COMPLETE SPECIFICATION.**NEW AND IMPROVED CONNECTORS FOR IRRIGATION PIPES AND THE LIKE.**

The following statement is a full description of this invention including the best method of performing it known to me:-

This invention relates to new and improved connectors for irrigation pipes and the like.

In an irrigation system, pipes, commonly of aluminium, are connected end to end by means of couplings, usually flexible; but in addition to these couplings a variety of connectors are usually required in the system; for example, elbow connector fittings, T-pieces and cruciform or four-way connector fittings and so on. A supplier of irrigation supplies, then, is required to maintain stocks of all such fittings, at considerable expense and no little inconvenience to himself.

One of the main objects of this invention is to provide a small number of units which may be joined together in different arrangements to form a variety of form of pipe connectors. Other objects of the invention are to provide such units which are simple and economical to manufacture, which may be easily and conveniently joined together or dismantled, and which are sturdy and durable in use.

With the foregoing and other objects in view, the invention resides broadly, in a connector for irrigation pipes or the like including a primary unit having a hollow body, two tubular arms leading into the hollow body and adapted to be connected to ends of irrigation or like pipes, the body having an opening therefrom; a secondary unit, having a hollow body with an opening therefrom, the bodies of the two units being adapted to be fitted together, their openings in register, to form a chamber communicating with the arms

and in this case the hollow body 26, with attachment flange 27 similar to that of the primary unit, has only one tubular arm 28 communicating therewith, this arm being formed with a reduction in diameter, though according to the invention it could be of constant diameter. The primary and secondary units are secured together, as before described, by bolts 23 and nuts 24 and with an interposed gasket 22, to form a T-piece pipe connector.

In Fig. 6, the secondary unit 29 has a hollow body 30 which is more or less cup-shaped, having no tubular arms communicating therewith. The secondary unit attachment flange 31, which again is a standard flange similar to that attachment flange 15 of the primary unit, is secured, as before described, to the flange of the primary unit by bolts 23 and nuts 24 with a gasket 22 interposed between the two flanges, the assembly forming an elbow pipe connector fitting.

Fig. 7 shows a connector of which the secondary unit 32, with a standard attachment flange 33 formed integrally with its hollow body 34, has a single tubular arm 35 communicating with the body. When the primary and secondary units are secured together, as before described, the axis of the tubular arm 35 of the secondary unit is perpendicular to the plane in which lie the axes of the two arms 11 and 12 of the primary unit, so that there is formed a three-way pipe connector in which each one of the arms 11, 12 and 35 is perpendicular to the other two.

In all forms of the invention, clamping means of any suitable well-known type may be associated with each of the tubular arms, for the ready engagement with ends of aluminium irrigation pipes; or a separate sealing union device may be used to connect each irrigation pipe to each tubular arm of a pipe connector.

It will be seen that by the use of units according to the invention, a wide variety of types of pipe connectors may be quickly and easily made up as and when required from relatively few basic units. Not only is this advantageous to manufacturers and retailers required to stock pipe couplings, but it will also be of considerable advantage to a person who, having installed an irrigation system with connectors according to the invention, wishes to extend or alter the irrigation system. In such a case, by means of units according to the invention, one type of pipe connector may be easily and quickly converted to a pipe connector of different type.

Units according to the invention may incorporate valves, stand pipes, risers and other fittings each having a body with an attachment flange, or two parallel attachment flanges, adapted to be secured, as described, to the attachment flanges of the basic units.

Connector fittings as for irrigation pipes or the like according to the invention will be found to be very effective in achieving the objects for which the invention has been devised. It will, of course, be understood that many minor modifications of constructional detail and design made be made within the ambit of the invention as defined by the appended claims.

The claims defining the invention are as follows:-

1. A connector for irrigation pipes or the like including a primary unit having a hollow body, two tubular arms leading into the hollow body and adapted to be connected to ends of irrigation or like pipes, the body having an opening therefrom; a secondary unit having a hollow body with an opening therefrom, the bodies of the two units being adapted to be fitted together, their openings in register, to form a chamber communicating with the arms of the primary unit; and means for releasably connecting

- 3.

11. A connector for irrigation pipes or the like substantially as herein described with reference to Fig. 5 of the accompanying drawings. (23rd October, 1959).

12. A connector for irrigation pipes or the like substantially as herein described with reference to Fig. 6 of the accompanying drawings. (23rd October, 1959).

13. A connector for irrigation pipes or the like substantially as herein described with reference to Fig. 7 of the accompanying drawings. (23rd October, 1959).

14. A connector for irrigation pipes or the like substantially as herein described with reference to the accompanying drawings. (23rd October, 1959).

G. R. CULLEN & COMPANY.
Patent Attorneys for Applicant.

Related Art:

<u>Serial No.</u>	<u>Application No.</u>	<u>Classification.</u>
---	7364/12	74. 5
---	18, 080/16	36. 1; 74. 5
207, 138	9396/55	74. 5.